DOCUMENT RESUME

ED 377 180 SP 035 620

AUTHOR Hranitz, John R.; Shanoski, Lorraine A.
TITLE Project Success: Challenging Children, Teachers, and Parents To Excel.
PUB DATE Oct 94
NOTE 8p.; Paper presented at the Quest for Excellence: Many Paths, Many Voices, One Goal Conference (Charleston, SC, October 13-14, 1994).
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Action Research; Elementary School Students; Elementary School Teachers; Heterogeneous Grouping; Higher Education; *Inservice Teacher Education; *Mathematics Education; Minority Group Children; *Multigraded Classes; Parent Participation; Parochial Schools; Primary Education; Program Design; *Programmed Instruction; Public Schools; *Science Education; Teacher Attitudes; Teaching Methods
IDENTIFIERS Dwight D Eisenhower Math and Science Educ Program; *Pennsylvania (Harrisburg)

ABSTRACT

Project Success is a teacher, administrator, and university faculty designed program, aimed to improve teacher motivation and pedagogical skills, student attitudes and achievement, and parent attitudes in science and mathematics education for kindergarten through grade 3. The project used an education program that was self-pacing and auto-educational, contained well-defined objectives, and followed varied grouping patterns. Teachers received training which strengthened their skills, enabled them to challenge existing practices and attitudes, and encouraged them to try new techniques. In fall 1992 a pilot study was conducted in six primary classrooms where the continuous progress approach was being implemented. The hypotheses to be tested indicted that both groups were equal in science and mathematics. The children in the six primary classrooms served as the experimental group. The control group of children was randomly selected from three other elementary schools in the district. Children in both groups were 90 percent minority. Control children received traditional age-graded instruction. Analysis of results showed significant difference between methods of instruction in science with students in the continuous progress group demonstrating superior achievement at the .01 level of significance. Both groups performed equally in mathematics. The project was then expanded to 25 other classrooms in 2 schools where teachers were trained and received support for restructuring their teaching methods and classroom environments. A study of their students' achievement compared with a control group showed no difference in mathematics but significantly better science performance among the Project Success students. (JB)

ED 377 180

PROJECT SUCCESS: CHALLENGING CHILDREN, TEACHERS, AND PARENTS TO EXCEL

John R. Hranitz, Ed. D.
and
Lorraine A. Shanoski, Ed. D.
Project Directors

THE QUEST FOR EXCELLENCE: MANY PATHS, MANY VOICES, ONE GOAL CONFERENCE

Sponsored by

South Carolina Association of Teacher Educators

and

South Carolina Association of Colleges of Teacher Education

October 13-14, 1994

Charleston, South Carolina

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J.R. Hranitz

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

S 023562

PROJECT SUCCESS: CHALLENGING CHILDREN, TEACHERS, AND PARENTS TO EXCELL

BY

Dr. John R. Hranitz
Professor
Bloomsburg University of Pennsylvania
Bloomsburg, PA 17815

Dr. Lorraine A. Shanoski
Professor
Bloomsburg University of Pennsylvania
Bloomsburg, PA 17185

ABSTRACT

Project Success is a Dwight D. Eisenhower funded mathematics and science program. In its first year*, the teachers, administrators, and university faculty have developed a model which is designed to improve teacher motivation and pedagogical skills, student attitudes and achievement, and parent attitudes in science and mathematics in kindergarten through grade 3.

During the 1980s, many school reform strategies were initiated to address failing test scores, incompetent high school graduates and the decline of the United States' competitiveness in the international community. Reform measures such as stricter promotion standards, grade retention, teacher minimum competency testing and state-mandated student assessment programs were implemented as possible remedies to the problems in our public schools. Kelly and Surbeck (1991) maintain

---

***Project Success began its first year in 1991-1992 through a series of meetings and visits by the teachers, administrators, and higher education faculty to schools in Pennsylvania and Connecticut in an effort to define and design the pilot project. The pilot project was completed during the 1992-1993 school year. Funding for the pilot project was received from the Pennsylvania Academy for the Profession of Teaching, the Harrisburg School District, and the State System of Higher Education Faculty Professional Development Grant. The Project Success pilot project involved 6 teachers who represented grades kindergarten through grade 3. These teachers formed the "core team" whose responsibilities centered upon formulating the total program within the building. Project Success received $530,000.00 for three years starting 1993-1994 to implement the goals developed in the initial pilot project.**

that, to date, few if any of these strategies have yielded positive results. They explained that while these reforms imposed additional standards on the public educational system, they did little, if anything to involve teachers and administrators in deciding how to solve problems which they confront on a daily basis.

Pavan (1977), who is credited with developing an ideal model in terms of the assumptions and behavioral implications of nongradedness, surveyed all comparative research studies reported between 1968 and 1976, a period which includes the high-water mark for attention to nongradedness, and reported five general conclusions:

1. Comparisons of graded and nongraded schools using standardized achievement tests continue to favor nongradedness.

2. Attendance in a nongraded school may improve the students' chances of good mental health and positive attitudes toward school.

3. Longitudinal studies indicate that the longer students are in a nongraded program, the more likely it is that they will have positive school attitudes and better academic achievement.

4. A nongraded environment is particularly beneficial in terms of academic achievement and mental health for blacks, boys, underachievers, and students of lower socioeconomic status.

5. Further research is needed that includes an assessment of actual practices in the allegedly graded and nongraded school in order to determine if the labels as described are accurate. (Pavan, p. 93)

Smith and Shepard (1990) advocate action research as the logical approach for the 1990s. This primary science and mathematics project directly and cooperatively involved the researchers, teachers, and school leaders in planning and implementing a strategy to improve the quality of teaching and learning. Fundamental considerations identified by Heathers (1966) which were addressed in this primary science and mathematics project included: 1) a well-formulated theory must be present; 2) the motivation and training needs of teachers who become involved in the project must be met; 3) the research design must be appropriate; and 4) university programs must be geared to the training of leaders and teachers in local improvement projects.

This primary science and mathematics project involves continuous progress, multi-age classes in science and mathematics as a step in the direction of nongradedness. Specifically, the researchers in this project are analyzing the effectiveness of a continuous progress approach in improving children's attitudes and achievement in science and mathematics and in enhancing teachers' attitudes, knowledge and teaching approach in science and mathematics. A continuous progress approach is an alternative to ability grouping and age grading within a

school which recognizes the unique needs, interests, abilities and learning styles and patterns of each child. This approach to organizing students' learning opportunities is aimed at insuring each child's success without reducing expectations regarding his/her progress. High expectations are set by encouraging each child and recognizing each accomplishment rather than rejecting those who do not measure up to classroom standards.

Project Success is a continuous progress science and mathematics program that: 1) promotes the development of self-directing autonomous individuals; 2) fosters the development of individual skills and talents; 3) values the whole child--emotionally, socially, physically, intellectually, and creatively; 4) involves the teacher and children in a co-learning atmosphere; 5) values learning and play as the work of the young child; 6) permits children of the same and/or different ages to work together; 7) utilizes a wide variety of teacher developed, hands-on materials; 8) considers the unique needs, interests, abilities, learning rates, styles, and patterns of each child; 9) emphasizes understanding and demonstrating rather than rote memorization and paper-and-pencil tests; 10) stresses processes; i.e., knowing, integrating, synthesizing, inquiring, measuring, evaluating, interpreting, analyzing, and applying; and 11) integrates science and mathematics into other subject areas--art, music, drama, literature, reading, physical education, language, and social studies.

Teachers in Project Success received training through a series of inservice workshops and graduate courses which strengthened their skills, enabled them to challenge existing practices and attitudes, and encouraged them to try new techniques. The areas targeted during the first three years were: 1) assessment of learning; 2) introduction and utilization of computer-assisted instruction on a daily basis; 3) implementation of individualized learning activities and packages as well as large and small group instruction; 4) implementation of teams for planning, creating, evaluating, and assessing the progress of the children, parents, and the project; 5) an integration of all areas of the curriculum into science and mathematics; 6) an implementation of vertical and horizontal grouping plans; 7) and implementation of a parenting program whose purposes were to strengthen the parents' skills and attitudes towards science and mathematics and how they view themselves as their child's first teacher.

In 1991, the researchers received an $8,640.00 grant from the Pennsylvania Academy for the Profession of Teaching to work with teachers and administrators at the Lincoln Early Childhood Center in Harrisburg, PA in examining continuous progress approaches through a series of meetings, guest speakers, and field trips. With the assistance of experts in science and mathematics, a classroom approach to science and mathematics, which was developmentally appropriate for children five to eight years of age, was identified. A successful program for children, working in a multi-age classrooms using hands-on manipulative science and mathematics materials was the goal. The curriculum was to be organized around thematic units of study. The Harrisburg School District contributed $6,480.00 to cover the cost of a graduate course in science during the summer of 1992. In addition to building their

own knowledge of science subject matter, teachers began to develop science and mathematics materials such as learning centers, manipulatives, experiments and academic games which they were able to field test with summer school students.

In the fall of 1992, a pilot study was conducted in six primary classrooms where the continuous progress approach was being implemented. A $6,940.00 grant from the State System of Higher Education Faculty Professional Development Council was received to maintain the project and to evaluate the effects of the pilot study. The two hypotheses to be tested indicated that both groups were equal in science and mathematics achievement. The children in the six primary classrooms served as the experimental group. The control group of children was randomly selected from three elementary schools within the Harrisburg School District that contained children from similar environmental surroundings. The children, both experimental and control, were represented by populations that contained 85% Black and Bi-racial children, 10% White children, and 5% Hispanic. The control group was not selected until the tests were to be administered to both groups. The experimental children were characterized by an educational program that was self-pacing, auto-educational, contained well-defined objectives, and followed varied grouping patterns. Children in the control group received traditional, age-graded, teacher-directed instruction in science and mathematics. A 2 x 3 x 2 factorial design was used with method of instruction, grade level, and sex as variables. Results of an Analysis of Variance showed that there was a significant difference between methods of instruction in science with students in the continuous progress group demonstrating superior achievement at the .01 level of significance. There were no significant differences between groups in mathematics achievement. There were no significant interactions. The first hypothesis was rejected. The children in continuous progress did significantly better in science than the control children. The second hypothesis was accepted that both groups performed equally in mathematics.

During the 1993-1994 school year, Project Success has been expanded to eighteen primary classrooms at the Lincoln Early Childhood Education Center and seven primary classrooms at the Holy Name of Jesus School. The expansion of the pilot study was due to the researchers receiving a Dwight D. Eisenhower Science and Mathematics Grant for $530,000.00. While how teachers teach and how they work with children is a most important variable in the success of the program, Otto (1969) points out that the classroom practices of teachers are influenced by the scope and variety of resources available to them. He further states that if resources are restricted, major advantages may not occur from a project. The financial support from a major grant acquisition is enabling Project Success teachers to continue their graduate study of science and mathematics, purchase classroom supplies and materials for science and mathematics, develop new centers and activities, be trained in and use computers in their classroom, and utilize classroom aides. The teachers have restructured their classrooms into mini-laboratories filled with learning centers and individual science and mathematics activities. In addition, there are monthly teacher workshop sessions, a monthly newsletter and parent meetings. We are pleased with the positive response to Project Success by children, teachers, parents, and administrators. Student

teachers at Bloomsburg University are able to benefit from their participation in the program as are students in our classes.

From September, 1993 to May, 1994, students in the experimental groups at Lincoln Early Childhood Center and Holy Name of Jesus School received science and mathematics instruction using a continuous progress approach. A total of 18 teachers from Lincoln Early Childhood Education and 7 teachers from Holy Name of Jesus School participated in the study. Students in the control groups at Downey Early Childhood Center and St. Catherine's School received traditional, age-graded, teacher directed instruction in science and mathematics. Teachers in the control schools were not identified until the testing of all students was to occur in May, 94. The schools were randomly selected from the schools available in the Harrisburg Area School District and parochial schools located in the Harrisburg area. Means and standard deviations of post test scores were computed; differences between means were analyzed by use of *t* tests. The results indicated that students in the continuous progress groups performed significantly ($p < .05$) better in science. Students in Lincoln performed significantly ($p < .05$) better than Downey students. Holy Name of Jesus students performed significantly ($p < .05$) better in science than St. Catherine's students. There were no significant differences ($p > .05$) between groups in mathematics achievement. There were no significant interactions.

A discussion of the results of the 1993-94 school year support the advocates of action research. Smith and Shepard (1990) emphasized that projects directly and cooperatively involve researchers, teachers, and school leaders. Heathers (1966) reinforced the idea that certain fundamental considerations must be addressed by any project. Project Success, a Dwight D. Eisenhower funded program, presented to the staff, children, teachers, principals, and parents a well-formulated theory characterized by improved motivation and training of teachers and parents resulting in higher achievement in science. The significant increase in science achievement by the children participating in Project Success strengthens the contention of the project participants: ***all participants must be involved if problems in our public schools are to be solved.***

REFERENCES

Heathers, G. (1996). School organization: Non-grading, dual progress, and team teaching. In J. I. Goodlad (Ed.), The Changing American School. Chicago: University of Chicago Press.

Kelley, M. F. and Surbeck, E. (1991). Restructuring early childhood education, fastback 329. Bloomington, IN: Phi Delta Kappa Educational Foundation.

Otto, F. (1969). Teacher in the Pennsylvania Project. Modern Language Journal, **53**, 411-420.

Pavan, B. N. (1977). The nongraded elementary school: Research on academic

achievement and mental health. Texas Tech Journal of Education, **4**, 91-107.

Shepard, L. A., and Smith M. L. (1990). Synthesis of research on grade retention. Educational Leadership, **47**, 84-88.